

Release notes for ENDF/B Development n-097_Bk_248
evaluation



April 26, 2017

- fudge-4.0 Warnings:

- Cross section does not match sum of linked reaction cross sections
crossSectionSum label 0: total (Error # 0): CS Sum.

WARNING: Cross section does not match sum of linked reaction cross sections! Max diff: 0.32%

- The ratio of smallest/largest eigenvalue is quite small, possibly leading to numerical instability in downstream codes.

Section 1 (n[multiplicity:'energyDependent', emissionMode:'prompt'] + n[emissionMode:'1 delayed'] + gamma [total fission] [nubar]): / Form 'eval': (Error # 0): Condition num.

WARNING: Ratio of smallest/largest eigenvalue (0.000000e+00) is too small

- The ratio of smallest/largest eigenvalue is quite small, possibly leading to numerical instability in downstream codes.

Section 2 (n[multiplicity:'energyDependent', emissionMode:'prompt'] + n[emissionMode:'1 delayed'] + gamma [total fission] [nubar]): / Form 'eval': (Error # 0): Condition num.

WARNING: Ratio of smallest/largest eigenvalue (4.746686e-09) is too small

- The ratio of smallest/largest eigenvalue is quite small, possibly leading to numerical instability in downstream codes.

Section 3 (total): / Form 'eval': / Component 0 (Error # 0): Condition num.

WARNING: Ratio of smallest/largest eigenvalue (0.000000e+00) is too small

- The ratio of smallest/largest eigenvalue is quite small, possibly leading to numerical instability in downstream codes.

Section 3 (total): / Form 'eval': / Component 1 (Error # 0): Condition num.

WARNING: Ratio of smallest/largest eigenvalue (0.000000e+00) is too small

- The ratio of smallest/largest eigenvalue is quite small, possibly leading to numerical instability in downstream codes.

Section 4 (n + Bk248): / Form 'eval': / Component 0 (Error # 0): Condition num.

WARNING: Ratio of smallest/largest eigenvalue (0.000000e+00) is too small

- The ratio of smallest/largest eigenvalue is quite small, possibly leading to numerical instability in downstream codes.

Section 4 (n + Bk248): / Form 'eval': / Component 1 (Error # 0): Condition num.

WARNING: Ratio of smallest/largest eigenvalue (0.000000e+00) is too small

- The ratio of smallest/largest eigenvalue is quite small, possibly leading to numerical instability in downstream codes.

Section 8 (n[multiplicity:'energyDependent', emissionMode:'prompt'] + n[emissionMode:'1 delayed'] + gamma [total fission]): / Form 'eval': / Component 0 (Error # 0): Condition num.

WARNING: Ratio of smallest/largest eigenvalue (0.000000e+00) is too small

9. The ratio of smallest/largest eigenvalue is quite small, possibly leading to numerical instability in downstream codes.

Section 8 (n[multiplicity:'energyDependent', emissionMode:'prompt'] + n[emissionMode:'1 delayed']) + gamma [total fission]): / Form 'eval': / Component 1 (Error # 0): Condition num.

WARNING: Ratio of smallest/largest eigenvalue (0.000000e+00) is too small

10. The ratio of smallest/largest eigenvalue is quite small, possibly leading to numerical instability in downstream codes.

Section 10 (n + Bk248_e1): / Form 'eval': (Error # 0): Condition num.

WARNING: Ratio of smallest/largest eigenvalue (6.687122e-10) is too small

11. The ratio of smallest/largest eigenvalue is quite small, possibly leading to numerical instability in downstream codes.

Section 11 (n + (Bk248_e2 -> Bk248 + gamma)): / Form 'eval': (Error # 0): Condition num.

WARNING: Ratio of smallest/largest eigenvalue (4.068658e-10) is too small

12. The ratio of smallest/largest eigenvalue is quite small, possibly leading to numerical instability in downstream codes.

Section 12 (n + (Bk248_e3 -> Bk248 + gamma)): / Form 'eval': (Error # 0): Condition num.

WARNING: Ratio of smallest/largest eigenvalue (4.865635e-10) is too small

13. The ratio of smallest/largest eigenvalue is quite small, possibly leading to numerical instability in downstream codes.

Section 13 (n + (Bk248_e4 -> Bk248 + gamma)): / Form 'eval': (Error # 0): Condition num.

WARNING: Ratio of smallest/largest eigenvalue (1.057305e-09) is too small

14. The ratio of smallest/largest eigenvalue is quite small, possibly leading to numerical instability in downstream codes.

Section 15 (n + (Bk248_e6 -> Bk248 + gamma)): / Form 'eval': (Error # 0): Condition num.

WARNING: Ratio of smallest/largest eigenvalue (1.729405e-09) is too small

15. The ratio of smallest/largest eigenvalue is quite small, possibly leading to numerical instability in downstream codes.

Section 16 (n + (Bk248_e7 -> Bk248 + gamma)): / Form 'eval': (Error # 0): Condition num.

WARNING: Ratio of smallest/largest eigenvalue (7.409412e-10) is too small

16. The ratio of smallest/largest eigenvalue is quite small, possibly leading to numerical instability in downstream codes.

Section 17 (n + (Bk248_c -> Bk248 + gamma)): / Form 'eval': (Error # 0): Condition num.

WARNING: Ratio of smallest/largest eigenvalue (0.000000e+00) is too small

17. The ratio of smallest/largest eigenvalue is quite small, possibly leading to numerical instability in downstream codes.

Section 18 (Bk249 + gamma): / Form 'eval': / Component 0 (Error # 0): Condition num.

WARNING: Ratio of smallest/largest eigenvalue (0.000000e+00) is too small

18. The ratio of smallest/largest eigenvalue is quite small, possibly leading to numerical instability in downstream codes.

Section 18 (Bk249 + gamma): / Form 'eval': / Component 1 (Error # 0): Condition num.

WARNING: Ratio of smallest/largest eigenvalue (0.000000e+00) is too small

19. The ratio of smallest/largest eigenvalue is quite small, possibly leading to numerical instability in downstream codes.

Section 19 (n + Bk248 [angular distribution]): / Form 'eval': (Error # 1): Condition num.

WARNING: Ratio of smallest/largest eigenvalue (0.000000e+00) is too small

20. The ratio of smallest/largest eigenvalue is quite small, possibly leading to numerical instability in downstream codes.

Section 20 (n[multiplicity:'energyDependent', emissionMode:'prompt'] + n[emissionMode:'1 delayed'] + gamma [total fission] [spectrum]): / Form 'eval': (Error # 0): Condition num.

WARNING: Ratio of smallest/largest eigenvalue (0.000000e+00) is too small

21. The ratio of smallest/largest eigenvalue is quite small, possibly leading to numerical instability in downstream codes.

Section 21 (n[multiplicity:'energyDependent', emissionMode:'prompt'] + n[emissionMode:'1 delayed'] + gamma [total fission] [spectrum]): / Form 'eval': (Error # 0): Condition num.

WARNING: Ratio of smallest/largest eigenvalue (0.000000e+00) is too small

22. The ratio of smallest/largest eigenvalue is quite small, possibly leading to numerical instability in downstream codes.

Section 22 (n[multiplicity:'energyDependent', emissionMode:'prompt'] + n[emissionMode:'1 delayed'] + gamma [total fission] [spectrum]): / Form 'eval': (Error # 0): Condition num.

WARNING: Ratio of smallest/largest eigenvalue (0.000000e+00) is too small

23. The ratio of smallest/largest eigenvalue is quite small, possibly leading to numerical instability in downstream codes.

Section 23 (n[multiplicity:'energyDependent', emissionMode:'prompt'] + n[emissionMode:'1 delayed'] + gamma [total fission] [spectrum]): / Form 'eval': (Error # 0): Condition num.

WARNING: Ratio of smallest/largest eigenvalue (0.000000e+00) is too small

- fudge-4.0 Errors:

1. Energy range of data set does not match cross section range

$$\text{reaction label 8: } n + (\text{Bk248_c} \rightarrow \text{Bk248} + \text{gamma}) / \text{Product: Bk248_c} / \text{Decay product: gamma_a} / \text{Multiplicity: (Error \# 0): Domain mismatch (a)}$$

WARNING: Domain doesn't match the cross section domain: (151935.0 -> 20000000.0) vs (110896.0 -> 20000000.0)
2. Energy range of data set does not match cross section range

$$\text{reaction label 8: } n + (\text{Bk248_c} \rightarrow \text{Bk248} + \text{gamma}) / \text{Product: Bk248_c} / \text{Distribution: / uncorrelated - angular - isotropic: (Error \# 0): Domain mismatch (a)}$$

WARNING: Domain doesn't match the cross section domain: (151935.0 -> 20000000.0) vs (110896.0 -> 20000000.0)
 WARNING: Domain doesn't match the cross section domain: (250000.0 -> 20000000.0) vs (110896.0 -> 20000000.0)
 WARNING: Domain doesn't match the cross section domain: (172197.0 -> 20000000.0) vs (110896.0 -> 20000000.0)
 WARNING: Domain doesn't match the cross section domain: (300000.0 -> 20000000.0) vs (110896.0 -> 20000000.0)
 ... plus 4 more instances of this message
3. Energy range of data set does not match cross section range

$$\text{reaction label 8: } n + (\text{Bk248_c} \rightarrow \text{Bk248} + \text{gamma}) / \text{Product: Bk248_c} / \text{Decay product: gamma_b} / \text{Multiplicity: (Error \# 0): Domain mismatch (a)}$$

WARNING: Domain doesn't match the cross section domain: (250000.0 -> 20000000.0) vs (110896.0 -> 20000000.0)
4. Energy range of data set does not match cross section range

$$\text{reaction label 8: } n + (\text{Bk248_c} \rightarrow \text{Bk248} + \text{gamma}) / \text{Product: Bk248_c} / \text{Decay product: gamma_c} / \text{Multiplicity: (Error \# 0): Domain mismatch (a)}$$

WARNING: Domain doesn't match the cross section domain: (172197.0 -> 20000000.0) vs (110896.0 -> 20000000.0)
5. Energy range of data set does not match cross section range

$$\text{reaction label 8: } n + (\text{Bk248_c} \rightarrow \text{Bk248} + \text{gamma}) / \text{Product: Bk248_c} / \text{Decay product: gamma_d} / \text{Multiplicity: (Error \# 0): Domain mismatch (a)}$$

WARNING: Domain doesn't match the cross section domain: (300000.0 -> 20000000.0) vs (110896.0 -> 20000000.0)
6. Energy range of data set does not match cross section range

$$\text{reaction label 8: } n + (\text{Bk248_c} \rightarrow \text{Bk248} + \text{gamma}) / \text{Product: Bk248_c} / \text{Decay product: gamma_e} / \text{Multiplicity: (Error \# 0): Domain mismatch (a)}$$

WARNING: Domain doesn't match the cross section domain: (250000.0 -> 20000000.0) vs (110896.0 -> 20000000.0)
7. Energy range of data set does not match cross section range

$$\text{reaction label 8: } n + (\text{Bk248_c} \rightarrow \text{Bk248} + \text{gamma}) / \text{Product: Bk248_c} / \text{Decay product: gamma_f} / \text{Multiplicity: (Error \# 0): Domain mismatch (a)}$$

WARNING: Domain doesn't match the cross section domain: (300000.0 -> 20000000.0) vs (110896.0 -> 20000000.0)
8. Energy range of data set does not match cross section range

$$\text{reaction label 8: } n + (\text{Bk248_c} \rightarrow \text{Bk248} + \text{gamma}) / \text{Product: Bk248_c} / \text{Decay product: gamma_g} / \text{Multiplicity: (Error \# 0): Domain mismatch (a)}$$

WARNING: Domain doesn't match the cross section domain: (300000.0 -> 20000000.0) vs (110896.0 -> 20000000.0)
9. Energy range of data set does not match cross section range

$$\text{reaction label 8: } n + (\text{Bk248_c} \rightarrow \text{Bk248} + \text{gamma}) / \text{Product: Bk248_c} / \text{Decay product: gamma_h} / \text{Multiplicity: (Error \# 0): Domain mismatch (a)}$$

WARNING: Domain doesn't match the cross section domain: (300000.0 -> 20000000.0) vs (110896.0 -> 20000000.0)

10. Calculated and tabulated Q values disagree.
reaction label 9: n[multiplicity:'2'] + Bk247 + gamma (Error # 0): Q mismatch

WARNING: Calculated and tabulated Q-values disagree: -5500741.374938965 eV vs -5481940. eV!

11. Energy range of data set does not match cross section range
reaction label 9: n[multiplicity:'2'] + Bk247 + gamma / Product: gamma_a / Distribution: / uncorrelated - angular - isotropic: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (6000000.0 -> 20000000.0) vs (5504230.0 -> 20000000.0)

12. Energy range of data set does not match cross section range
reaction label 9: n[multiplicity:'2'] + Bk247 + gamma / Product: gamma_b / Multiplicity: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (6000000.0 -> 20000000.0) vs (5504230.0 -> 20000000.0)

13. Energy range of data set does not match cross section range
reaction label 9: n[multiplicity:'2'] + Bk247 + gamma / Product: gamma_b / Distribution: / uncorrelated - angular - isotropic: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (6000000.0 -> 20000000.0) vs (5504230.0 -> 20000000.0)

14. Energy range of data set does not match cross section range
reaction label 9: n[multiplicity:'2'] + Bk247 + gamma / Product: gamma_c / Distribution: / uncorrelated - angular - isotropic: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (6000000.0 -> 20000000.0) vs (5504230.0 -> 20000000.0)

15. Energy range of data set does not match cross section range
reaction label 9: n[multiplicity:'2'] + Bk247 + gamma / Product: gamma_d / Multiplicity: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (6000000.0 -> 20000000.0) vs (5504230.0 -> 20000000.0)

16. Energy range of data set does not match cross section range
reaction label 9: n[multiplicity:'2'] + Bk247 + gamma / Product: gamma_d / Distribution: / uncorrelated - angular - isotropic: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (6000000.0 -> 20000000.0) vs (5504230.0 -> 20000000.0)

17. Energy range of data set does not match cross section range
reaction label 9: n[multiplicity:'2'] + Bk247 + gamma / Product: gamma_e / Multiplicity: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (6000000.0 -> 20000000.0) vs (5504230.0 -> 20000000.0)

18. Energy range of data set does not match cross section range
reaction label 9: n[multiplicity:'2'] + Bk247 + gamma / Product: gamma_e / Distribution: / uncorrelated - angular - isotropic: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (6000000.0 -> 20000000.0) vs (5504230.0 -> 20000000.0)

19. Energy range of data set does not match cross section range
reaction label 9: n[multiplicity:'2'] + Bk247 + gamma / Product: gamma_f / Multiplicity: (Error # 0): Domain mismatch (a)
- WARNING: Domain doesn't match the cross section domain: (6000000.0 -> 20000000.0) vs (5504230.0 -> 20000000.0)
20. Energy range of data set does not match cross section range
reaction label 9: n[multiplicity:'2'] + Bk247 + gamma / Product: gamma_f / Distribution: / uncorrelated - angular - isotropic: (Error # 0): Domain mismatch (a)
- WARNING: Domain doesn't match the cross section domain: (6000000.0 -> 20000000.0) vs (5504230.0 -> 20000000.0)
21. Energy range of data set does not match cross section range
reaction label 9: n[multiplicity:'2'] + Bk247 + gamma / Product: gamma_g / Multiplicity: (Error # 0): Domain mismatch (a)
- WARNING: Domain doesn't match the cross section domain: (6000000.0 -> 20000000.0) vs (5504230.0 -> 20000000.0)
22. Energy range of data set does not match cross section range
reaction label 9: n[multiplicity:'2'] + Bk247 + gamma / Product: gamma_g / Distribution: / uncorrelated - angular - isotropic: (Error # 0): Domain mismatch (a)
- WARNING: Domain doesn't match the cross section domain: (6000000.0 -> 20000000.0) vs (5504230.0 -> 20000000.0)
23. Energy range of data set does not match cross section range
reaction label 9: n[multiplicity:'2'] + Bk247 + gamma / Product: gamma_h / Multiplicity: (Error # 0): Domain mismatch (a)
- WARNING: Domain doesn't match the cross section domain: (6000000.0 -> 20000000.0) vs (5504230.0 -> 20000000.0)
24. Energy range of data set does not match cross section range
reaction label 9: n[multiplicity:'2'] + Bk247 + gamma / Product: gamma_h / Distribution: / uncorrelated - angular - isotropic: (Error # 0): Domain mismatch (a)
- WARNING: Domain doesn't match the cross section domain: (6000000.0 -> 20000000.0) vs (5504230.0 -> 20000000.0)
25. Energy range of data set does not match cross section range
reaction label 9: n[multiplicity:'2'] + Bk247 + gamma / Product: gamma_i / Multiplicity: (Error # 0): Domain mismatch (a)
- WARNING: Domain doesn't match the cross section domain: (6000000.0 -> 20000000.0) vs (5504230.0 -> 20000000.0)
26. Energy range of data set does not match cross section range
reaction label 9: n[multiplicity:'2'] + Bk247 + gamma / Product: gamma_i / Distribution: / uncorrelated - angular - isotropic: (Error # 0): Domain mismatch (a)
- WARNING: Domain doesn't match the cross section domain: (6000000.0 -> 20000000.0) vs (5504230.0 -> 20000000.0)
27. Calculated and tabulated Q values disagree.
reaction label 10: n[multiplicity:'3'] + Bk246 + gamma (Error # 0): Q mismatch
- WARNING: Calculated and tabulated Q-values disagree: -12049873.64291382 eV vs -1.20311e7 eV!

28. Energy range of data set does not match cross section range
reaction label 10: n[multiplicity:'3'] + Bk246 + gamma / Product: gamma_a / Multiplicity: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (12500000.0 -> 20000000.0) vs (12080000.0 -> 20000000.0)

29. Energy range of data set does not match cross section range
reaction label 10: n[multiplicity:'3'] + Bk246 + gamma / Product: gamma_a / Distribution: / uncorrelated - angular - isotropic: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (12500000.0 -> 20000000.0) vs (12080000.0 -> 20000000.0)

30. Energy range of data set does not match cross section range
reaction label 10: n[multiplicity:'3'] + Bk246 + gamma / Product: gamma_b / Multiplicity: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (12500000.0 -> 20000000.0) vs (12080000.0 -> 20000000.0)

31. Energy range of data set does not match cross section range
reaction label 10: n[multiplicity:'3'] + Bk246 + gamma / Product: gamma_b / Distribution: / uncorrelated - angular - isotropic: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (12500000.0 -> 20000000.0) vs (12080000.0 -> 20000000.0)

32. Calculated and tabulated Q values disagree.
reaction label 11: n[multiplicity:'4'] + Bk245 + gamma (Error # 0): Q mismatch

WARNING: Calculated and tabulated Q-values disagree: -17968200.00524902 eV vs -1.79494e7 eV!

33. Energy range of data set does not match cross section range
reaction label 11: n[multiplicity:'4'] + Bk245 + gamma / Product: gamma_a / Multiplicity: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (18500000.0 -> 20000000.0) vs (18022400.0 -> 20000000.0)

34. Energy range of data set does not match cross section range
reaction label 11: n[multiplicity:'4'] + Bk245 + gamma / Product: gamma_a / Distribution: / uncorrelated - angular - isotropic: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (18500000.0 -> 20000000.0) vs (18022400.0 -> 20000000.0)

35. Energy range of data set does not match cross section range
reaction label 11: n[multiplicity:'4'] + Bk245 + gamma / Product: gamma_b / Multiplicity: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (18500000.0 -> 20000000.0) vs (18022400.0 -> 20000000.0)

36. Energy range of data set does not match cross section range
reaction label 11: n[multiplicity:'4'] + Bk245 + gamma / Product: gamma_b / Distribution: / uncorrelated - angular - isotropic: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (18500000.0 -> 20000000.0) vs (18022400.0 -> 20000000.0)

37. Energy range of data set does not match cross section range
reaction label 11: n[multiplicity:'4'] + Bk245 + gamma / Product: gamma_c / Multiplicity: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (18500000.0 -> 20000000.0) vs (18022400.0 -> 20000000.0)

38. Energy range of data set does not match cross section range
reaction label 11: n[multiplicity:'4'] + Bk245 + gamma / Product: gamma_c / Distribution: / uncorrelated - angular - isotropic: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (18500000.0 -> 20000000.0) vs (18022400.0 -> 20000000.0)

39. Energy range of data set does not match cross section range
reaction label 11: n[multiplicity:'4'] + Bk245 + gamma / Product: gamma_d / Multiplicity: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (19000000.0 -> 20000000.0) vs (18022400.0 -> 20000000.0)

40. Energy range of data set does not match cross section range
reaction label 11: n[multiplicity:'4'] + Bk245 + gamma / Product: gamma_d / Distribution: / uncorrelated - angular - isotropic: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (19000000.0 -> 20000000.0) vs (18022400.0 -> 20000000.0)

41. Energy range of data set does not match cross section range
reaction label 11: n[multiplicity:'4'] + Bk245 + gamma / Product: gamma_e / Multiplicity: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (18500000.0 -> 20000000.0) vs (18022400.0 -> 20000000.0)

42. Energy range of data set does not match cross section range
reaction label 11: n[multiplicity:'4'] + Bk245 + gamma / Product: gamma_e / Distribution: / uncorrelated - angular - isotropic: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (18500000.0 -> 20000000.0) vs (18022400.0 -> 20000000.0)

43. Calculated and tabulated Q values disagree.
reaction label 13: Bk249 + gamma (Error # 0): Q mismatch

WARNING: Calculated and tabulated Q-values disagree: 6282895.36605835 eV vs 6.3017e6 eV!

44. Multiplicity does not match sum of linked product multiplicities!
multiplicitySum label 9: n + (Bk248_c ->Bk248 + gamma) total gamma multiplicity (Error # 0): summedMultiplicityMismatch

WARNING: Multiplicity does not match sum of linked product multiplicities! Max diff: 5.94%

45. Multiplicity does not match sum of linked product multiplicities!
multiplicitySum label 10: n[multiplicity:'2'] + Bk247 + gamma total gamma multiplicity (Error # 0): summedMultiplicityMismatch

WARNING: Multiplicity does not match sum of linked product multiplicities! Max diff: 93.79%

46. Multiplicity does not match sum of linked product multiplicities!
 $multiplicitySum$ label 11: $n[multiplicity:'3'] + Bk246 + \text{gamma total gamma multiplicity}$
 (Error # 0): *summedMultiplicityMismatch*
- WARNING: Multiplicity does not match sum of linked product multiplicities! Max diff: 100.00%
47. Multiplicity does not match sum of linked product multiplicities!
 $multiplicitySum$ label 12: $n[multiplicity:'4'] + Bk245 + \text{gamma total gamma multiplicity}$
 (Error # 0): *summedMultiplicityMismatch*
- WARNING: Multiplicity does not match sum of linked product multiplicities! Max diff: 59.25%
48. Calculated and tabulated Q values disagree.
 $fissionComponent$ label 0: $/reactionSuite/fissionComponents/fissionComponent[@label='0']$
 (Error # 0): *Q mismatch*
- WARNING: Calculated and tabulated Q-values disagree: 232018150219.9523 eV vs 2.146196e8 eV!
49. Calculated and tabulated Q values disagree.
 $fissionComponent$ label 1: $/reactionSuite/fissionComponents/fissionComponent[@label='1']$
 (Error # 0): *Q mismatch*
- WARNING: Calculated and tabulated Q-values disagree: 232018150219.9523 eV vs 2.146196e8 eV!
50. Calculated and tabulated Q values disagree.
 $fissionComponent$ label 2: $/reactionSuite/fissionComponents/fissionComponent[@label='2']$
 (Error # 0): *Q mismatch*
- WARNING: Calculated and tabulated Q-values disagree: 232018150219.9523 eV vs 2.146196e8 eV!
51. Calculated and tabulated Q values disagree.
 $fissionComponent$ label 3: $/reactionSuite/fissionComponents/fissionComponent[@label='3']$
 (Error # 0): *Q mismatch*
- WARNING: Calculated and tabulated Q-values disagree: 232018150219.9523 eV vs 2.146196e8 eV!
52. A covariance matrix was not positive semi-definite, so it has negative eigenvalues.
 $Section 19 (n + Bk248 [angular distribution]): / Form 'eval': / LegendreLValue L=1 vs 1$ (Error # 0): *Bad evs*
- WARNING: 10 negative eigenvalues! Worst case = -3.230587e-05
- njoy2012 Warnings:
 1. Evaluation has no resonance parameters given
 $unresr...calculation of unresolved resonance cross sections (0): No RR$

```
---message from unresr---mat 9749 has no resonance parameters
copy as is to nout
```
 2. In some evaluations, the partial fission reactions MT=19, 20, 21, and 38 are given in File 3, but no corresponding distributions are given. In these cases, it is assumed that MT=18 should be used for the fission neutron distributions.
 $heatr...prompt kerma (0): HEATR/hinit (3)$

```
---message from hinit---mt19 has no spectrum  
mt18 spectrum will be used.
```

3. Recoil is not given, so one-particle recoil approximation used.
heatr...prompt kerma (1): HEATR/hinit (4)

```
---message from hinit---mf6, mt 16 does not give recoil za= 97247  
one-particle recoil approx. used.
```

4. Recoil is not given, so one-particle recoil approximation used.
heatr...prompt kerma (2): HEATR/hinit (4)

```
---message from hinit---mf6, mt 17 does not give recoil za= 97246  
one-particle recoil approx. used.
```

5. Recoil is not given, so one-particle recoil approximation used.
heatr...prompt kerma (3): HEATR/hinit (4)

```
---message from hinit---mf6, mt 37 does not give recoil za= 97245  
one-particle recoil approx. used.
```

6. Recoil is not given, so one-particle recoil approximation used.
heatr...prompt kerma (4): HEATR/hinit (4)

```
---message from hinit---mf6, mt 51 does not give recoil za= 97248  
one-particle recoil approx. used.
```

7. Recoil is not given, so one-particle recoil approximation used.
heatr...prompt kerma (5): HEATR/hinit (4)

```
---message from hinit---mf6, mt 52 does not give recoil za= 97248  
one-particle recoil approx. used.
```

8. Recoil is not given, so one-particle recoil approximation used.
heatr...prompt kerma (6): HEATR/hinit (4)

```
---message from hinit---mf6, mt 53 does not give recoil za= 97248  
one-particle recoil approx. used.
```

9. Recoil is not given, so one-particle recoil approximation used.
heatr...prompt kerma (7): HEATR/hinit (4)

```
---message from hinit---mf6, mt 54 does not give recoil za= 97248  
one-particle recoil approx. used.
```

10. Recoil is not given, so one-particle recoil approximation used.
heatr...prompt kerma (8): HEATR/hinit (4)

```
---message from hinit---mf6, mt 55 does not give recoil za= 97248  
one-particle recoil approx. used.
```

11. Recoil is not given, so one-particle recoil approximation used.
heatr...prompt kerma (9): HEATR/hinit (4)

```
---message from hinit---mf6, mt 56 does not give recoil za= 97248  
one-particle recoil approx. used.
```

12. Recoil is not given, so one-particle recoil approximation used.
heatr...prompt kerma (10): HEATR/hinit (4)

```
---message from hinit---mf6, mt 57 does not give recoil za= 97248
one-particle recoil approx. used.
```

13. Recoil is not given, so one-particle recoil approximation used.
heatr...prompt kerma (11): HEATR/hinit (4)

```
---message from hinit---mf6, mt 91 does not give recoil za= 97248
one-particle recoil approx. used.
```

14. Recoil is not given, so one-particle recoil approximation used.
heatr...prompt kerma (12): HEATR/hinit (4)

```
---message from hinit---mf6, mt102 does not give recoil za= 97249
photon momentum recoil used.
```

15. There is a problem with the fission energy release.
heatr...prompt kerma (17): HEATR/nheat (3)

```
---message from nheat---changed q from 2.146196E+08 to 2.034989E+08
for mt 18
```

16. Evaluation has no resonance parameters given
purr...probabalistic unresolved calculation (0): No RR

```
---message from purr---mat 9749 has no resonance parameters
copy as is to nout
```

17. The number of coefficients is too big.
covr...process covariance data (1): COVR/matshd (3)

```
---message from matshd--- 96 coefficients > 2
reset and continue
```